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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/201,228	11/30/1998	REMY GRIFFAIS	9710-004	1303

23557 7590 12/03/2002

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EXAMINER	
MARSCHEL, ARDIN H	
ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/201,228	Graiffais et al.
Examiner	**Art Unit**
Ardin Marschel	1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 3/11/02 and 7/11/02

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-3 and 8-59 is/are pending in the application.

4a) Of the above, claim(s) 17-29, 31-50, and 53-56 is/are withdrawn from consideratio

5) ☒ Claim(s) 4-7 have been canceled.

6) ☒ Claim(s) 1-3, 8-16, 30, 51, 52, and 57-59 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claims 1-3 and 8-59 are subject to restriction and/or election requirement

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examine

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☒ Interview Summary (PTO-413) Paper No(s). 14 1/2
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

The file for the instant application has been fully reconstructed.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submissions, dated 3/11/02 and 7/11/02, have been entered.

Applicants' arguments, dated 3/11/02 and 7/11/02, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Applicants are hereby notified that the required timing for the correction of drawings has changed. See the last 6 lines on the sheet which is attached entitled "Attachment for PTO-948 (Rev. 03/01 or earlier)". It is noted that a PTO Form 948 is mailed herewith. Due to the above notification Applicants are required to submit drawing corrections within the time period set for responding to this Office action. Failure to respond to this

requirement may result in abandonment of the instant application or a notice of a failure to fully respond to this Office action.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The present title includes both nucleic acids and uses thereof whereas in contrast the presently elected claims which are under examination are directed to isolated polynucleotides, recombinant vectors, genetically engineered host cells, DNA chips, and kits containing said polynucleotides.

Claims 1-3, 8-16, 30, 51, 52, and 57-59 are rejected, as discussed below, under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9, 11, 13, 15, 30, 51, and 52 are vague and indefinite as to what limitations that they contain due to depending from one or more canceled claims directly or indirectly. Clarification via clearer claim wording is requested.

Upon reconsideration of the SEQ ID NO: sequences cited in the instant claims, it was revealed that these SEQ ID NO: sequences are amino acid sequences and not nucleic acid sequences. Thus, the claims could be interpreted in two different ways. One way is that the sequences of the

polynucleotides in the claims are those which are specific segments of the full nucleotide sequence of the *Chlamydia trachomatis* genome which encode the sequences in the claims. This interpretation would result in one nucleotide sequence for each amino acid cited in the claims. Alternatively, the polynucleotides as claimed may be interpreted as being any polynucleotide which encodes the sequences of amino acids as cited in the claims which thus encompasses a very large number of sequences for each cited SEQ ID NO: in the instant claims given the redundancy of codon usage which is well known for encoding amino acids in a nucleic acid. It is noted, however, that the claim is not clearly worded as to either of these interpretations due to a lack of any encoding type wording in the claims by which to relate amino acid sequences such as SEQ ID NO: 1083 etc. to polynucleotides. It is noted that claims 57 and 58 are not included in this rejection because they do, in fact, require that the claimed polynucleotide(s) are within the sequence segments within specific inserts of deposited clones. Clarification via clearer claim wording is requested.

Claims 1-3, 8-16, 30, 51, 52, and 57-59 all contain, either directly or indirectly via dependence, limitations directed to certain percentages of homology, such as 80 % or 99.9%. These homology limitations are confusingly reasonably interpretable in two very different ways. One interpretation is that the

percentage homology is determined by noting what percentage of the claimed polynucleotide itself contains nucleotide residues which are the same as in the polynucleotide(s) (Note above unclarity as to amino acids vs. polynucleotide embodiments in the instant claims.) as defined by the SEQ ID NOS: in the claims. In this interpretation a subsegment, including small subsegments, of a polynucleotide defined by a SEQ ID NO: in the claims may be an embodiment of the instant claims. A second and different interpretation is that the claimed polynucleotides are evaluated via the percentage of nucleotide residues of the polynucleotides defined by the SEQ ID NOS: that are cited in the claims. Thus the 100% standard for percentage evaluation may be evaluated from the percentage of claimed polynucleotide nucleotide residues vs. the percentage of SEQ ID NO: defined nucleotide residues which is contained within the claimed polynucleotide. The instant claims as worded do not distinguish between these two interpretations, albeit that the latter interpretation may be what is meant by applicants. Clarification of the metes and bounds of the percentage evaluation as required in the instant claims via clearer claim wording is requested.

Claims 57 and 58 contain the phrase "is contained" as describing being contained within a Deposited material. This causes the claim to be vague and indefinite as to whether the claimed polynucleotide is only that within said Deposited

material or whether the claims are inclusive of polynucleotides isolated from said Deposited material. Clarification via clearer claim wording is requested.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 51, 52, 57, and 58 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Product O 2503 of the 1990 Sigma Chemical Catalog.

It is noted that consideration of all of the amino acid sequences as cited in the claims as SEQ ID NOS: 1083 etc. contain a Phenylalanine amino acid therein. See, for example, amino acid residue number 13 of SEQ ID NO: 1083. Noting the above possible interpretations of the instant claim wording the claims may be interpreted as defining the claimed polynucleotides via what sequence encodes the amino acids of the SEQ ID NOS. It is additionally noted that a common and well known code for Phenylalanine is "TTT". It is also noted from above that subsegments of the cited polynucleotides, via amino acid sequences, may be evaluated as to percentage homology. Thus, a prior art disclosure of a polynucleotide, isolated and sold as a

commercial product, as the above noted Product O 2503 which is a "TTT" polynucleotide is within the metes and bounds of the instant claims thus supporting this rejection due to its being 100% homologous to the "TTT" subsegment within each of the instantly cited SEQ ID NOS. in the claims as to polynucleotides thereby defined.

Claims 1-3, 30, 51, 52, 57, and 58 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Southern (P/N 5,700,637).

The abstract of Southern discloses the practice of arrays which contain the whole of a "complete set of oligonucleotides". Such a complete set is described in column 4, line 51, through column 5, line 40, wherein all of the possible different sequences are present on the array for probes of a selected length. The smallest set covers doublets which results in 4 X 4 probes on the array or 16 probes. The largest specifically disclosed set is where the probe length parameter "s" is 20 as in the Table in column 5. Specifically, one probe length which is herein pointed to is the "s" = 9 length which may be reasonably interpreted as including probes which extend for 3 triplet codons in encoding amino acids. Since all possible probes of this length are prepared for such an array in the reference, all possible sets of three triplet codons are on the array as probes. Thus, any of the instantly claimed polynucleotides which contain

three triplets of polynucleotide sequence for 3 encoded amino acids as in the instantly cited SEQ ID NOS: are thus anticipated as being on an array surface as required in the instant DNA chip claim 30, therefore anticipating this claim and others. This interpretation also corresponds to the 100% homology interpretation of the claims of subsegments of the cited SEQ ID NO: defined polynucleotides.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-3, 30, 51, 52, 57, and 58 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Southern (P/N 5,700,637).

The above prior art rejection based on Southern describes

the polynucleotide array content of the reference and is reiterated here. The reference, however, may be interpreted as describing various arrays with complete sets of polynucleotides of a certain length wherein the sequences are motivated and suggested thereby due to not citing the actual sequences but suggesting them in the complete set descriptions therein. Thus, this rejection is set forth corresponding to such an interpretation as the reference suggests and motivates instant claim embodiments via well known amino acid coding sequences for triplet codon usage by cells.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to prepare the arrays of Southern thus producing embodiments of the instant invention as suggested codon polynucleotide sequences as also instantly claimed.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703)308-4242 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

November 29, 2002

Ardin H. Marschel

ARDIN H. MARSCHEL
PRIMARY EXAMINER